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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,455	03/24/2004	Mitsugi Chonan	32405R169	2932
441	7590	10/21/2005	EXAMINER	
SMITH, GAMBRELL & RUSSELL, LLP 1850 M STREET, N.W., SUITE 800 WASHINGTON, DC 20036			LE, DAVID D	
		ART UNIT		PAPER NUMBER
				3681

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/807,455	CHONAN ET AL.	
	Examiner	Art Unit	
	David D. Le	3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 March 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-8 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 24 March 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This is the first Office action on the merits of Application No. 10/807,455, filed on 24 March 2004. Claims 1-8 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:

- Foreign Priority Document, received on 03/24/04
- Information Disclosure Statement, received on 03/24/05
- Information Disclosure Statement, received on 06/16/04
- Declaration, received on 06/16/04
- Power of Attorney, received on 09/15/04

Specification

3. The disclosure is objected to because of the following informalities:

- Page 9, line 13, the “recoil rope 46” should be --recoil rope 45--.
- Page 14, line 20, “the driving shaft 82” should be --the front wheel driving shaft 82--.
- Page 14, line 21, “a front wheel driving shaft 85” should be --a driving shaft 85--.
- Page 17, line 14, “leer 6” should be --lever 6--.
- Page 18, line 28, “bake disk 100” should be --brake disk 100--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

- Claim 1, line 4 recites the limitation "an engine". It is unclear whether this engine is the same as the one, which is previously recited on line 1 of the claim.
- Claim 5 recites the limitation "said front wheel". There is insufficient antecedent basis for this limitation in the claim.
- Claim 6 recites the limitation "said front wheel". There is insufficient antecedent basis for this limitation in the claim.
- Claim 7 recites the limitation "said front wheel". There is insufficient antecedent basis for this limitation in the claim.
- Claim 8 recites the limitation "said front wheel". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 4,504,247 to Chana et al.**

Claims 1-4:

Chana (Figs. 1-2; column 2, line 15 – column 6, line 2) discloses a control mechanism for a variable ratio drive system comprising:

- An engine (i.e., column 2, line 28);
- A crankshaft (24) driven by said engine, said crankshaft being arranged in a vehicle body in a widthwise direction of the vehicle body (i.e. Fig. 2);
- A primary shaft (16) which is provided with a primary pulley (44) having a variable groove width and to which the rotation of said crankshaft is operatively applied (i.e., Fig. 2);
- A secondary shaft (74) provided with a secondary pulley (94), said secondary pulley being coupled to said primary pulley via a belt (96) and having a variable groove width (i.e., Fig. 2);
- An output shaft (118) arranged in parallel to said secondary shaft and coupled to said secondary shaft via a forward/backward switching mechanism (120);

- An axle (i.e., Fig. 2; being the combination of shafts 138 and 140) coupled to said output shaft via a gear train (i.e., Fig. 2); and inherently coupled to either front driving wheels or rear driving wheels;
- A sub-shaft (18) which is arranged parallel to said crankshaft and to which the rotation of said crankshaft is transmitted via a rotation transmitting member (22); and
- Wherein said primary shaft is concentrically arranged on said sub-shaft (i.e., Fig. 2).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chana et al. in view of U. S. Patent No. 6,755,090 to Ima.**

Claims 5-8:

Chana discloses the limitations as set forth above. Regarding claims 5-8, *Chana* lacks a front wheel driving shaft.

Ima (i.e., Fig. 1; column 7, line 55), on the other hand, teaches a gear retaining mechanism comprising:

- A front wheel driving shaft (17) operatively coupled to axle (8) via a gear train (i.e., element 15); and
- Wherein said front wheel driving shaft (17) is operatively coupled to front wheels (12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize the important aspect of vehicle traction and modify Chana variable ratio drive system to include the front wheel driving shaft, in view of *Ima*, for the benefit of improving the vehicle traction during off-road operations.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Chonan et al. (U. S. Patent Application Publication No. US2005/0119076) teaches a power transmission system of engine as shown in Fig. 2.
- Smit et al. (U. S. Patent No. 4,458,318) teaches a control arrangement for a variable pulley transmission as shown in Fig. 1.

- Moroto et al. (U. S. Patent No. 4,602,525) teaches a continuously variable speed transmission for a vehicle having a forward-reverse changeover mechanism as shown in Fig. 1.
- Iwatuki et al. (U. S. Patent No. 6,875,152) teaches a vehicle drive line as shown in Fig. 6.
- Hofbauer et al. (U. S. Patent No. 4,392,394) teaches an engine-gear arrangement for vehicles as shown in Fig. 1.
- Hattori (U. S. Patent No. 4,560,369) teaches a belt type continuous reduction gear mechanism as shown in Fig. 1.
- Lupo et al. (U. S. Patent No. 4,304,150) teaches a transmission unit for motor vehicles as shown in Fig. 1.
- Murakami et al. (U. S. Patent No. 6,902,502) teaches a continuously variable transmission as shown in Fig. 8.
- Japanese Patent No. JP404285354A teaches a transmission for vehicle as shown in Fig. 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jay
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PRIMARY EXAMINER
AU 3681 10/17/05